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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/755,024	01/09/2004	Tapesh Yadav	037768-0177	7726

22428 7590 09/27/2006

FOLEY AND LARDNER LLP  
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WASHINGTON, DC 20007

EXAMINER
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WYSZOMIERSKI, GEORGE P

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 09/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/755,024

Applicant(s)

YADAV, TAPESH

Examiner

George P. Wyszomierski

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 16-18 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 8/14/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

Art Unit: 1742

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moser (U.S. patent 5,417,956), for reasons as stated in the Office Action of February 13, 2006.

Moser discloses making nanoscale particles by a method which includes forcing a mixture of precursor solutions and precipitating agents(s) through a reactor under high pressure such that the precursors react with the precipitating agents, i.e. a lower valence material is precipitated in the form of nanoscale particles. The solutions can be recirculated and remixed as needed. The prior art process further includes an additional high temperature calcining step, and can be used to make various oxides and mixtures, i.e. products comprising metal and non-metal (oxygen). The precursors may be organometallic as recited in claim 6, and may comprise one or more of the elements recited in claim 19.

The prior art does not disclose making powders comprising nitrogen or carbon, as recited in instant claims 12 and 13, and does not disclose the product value ranges as recited in instant claims 1, 4 and 5. These differences are not seen as resulting in a patentable distinction between the prior art and the claimed invention because:

a) Many of the precursors and precipitating agents used in the Moser process contain nitrogen and/or carbon (see Moser column 4, line 44 to column 5, line 9), and the examiner's position is that at least a residual amount of nitrogen or carbon would remain in the final product

of the prior art process, at least enough to form powders which "comprise" these elements in accord with the instant claims.

b) With regard to product value, one important aspect of the Moser process involves varying the pressure applied to the materials in the prior art reactor; note particularly example 3 of Moser. It would have been a trivial matter for one of ordinary skill in the art to select a pressure which results in a product value within the ranges as presently claimed.

Consequently, a prima facie case of obviousness is established between the disclosure of Moser and the presently claimed invention.

3. In the response filed August 14, 2006, Applicant has amended claims 1, 4 and 5 in a manner that clearly overcomes the rejection under 35 USC 112, second paragraph.

Applicant alleges that the Moser patent would not teach the process as claimed to one of ordinary skill in the art because Moser's teachings are too vague to determine the product value (as defined in the instant claims), let alone the pressure gradients between parts of the reactor. The examiner respectfully disagrees with respect to the product value, because the product value as claimed has no upper limit, i.e. it is an amount "more than" or "greater than" a certain value. Therefore, simply raising the value of any one or more of the three elements that comprise the claimed product value (axial velocity, axial length, inverse of axial dispersion coefficient) will result in a product value as claimed, no matter how much the value of any of these elements is increased. With regard to pressure gradients, nothing in the instant claims defines or limits any particular pressure gradients to be used in the claimed process.


4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300. This Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
GEORGE WYSZOMIERSKI  
PRIMARY EXAMINER  
GROUP 1700

GPW  
September 21, 2006